3: Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



the Ohio three hundred miles below Pittsburg, one hundred miles from here, snow hardly ever remains on the ground, and the ground is bare for most of the winter. In autumn and even up to Christmas and New Year or beyond that time, there is little frost, and even if in a clear night the ground should freeze, it thaws soon after sunrise. There are very few clear, beautiful days in the winter-time; much of the time it rains, occasionally it snows. After a few clear days a change may be looked for. If there has been quite a snow, rain may follow. Yet the Muskingum, not having a strong current, is frozen over when there are several cold nights in succession. Usually this happens once during the winter, rarely oftener.

The Indians make little provision to feed their cattle in winter, for as there is no deep snow and the weather is generally mild, cattle and particularly horses can forage for themselves, finding feed in the woods. In the bottoms grass never quite dies away but remains green toward the end of March and beginning of April grows again.

Of wild fruits the strawberries,[85] much like those in Europe, are the first to ripen in spring. Blackberries,[86] raspberries,[87] bilberries,[88] are also found, though not native to these parts, for these varieties grow best on hills and in not too rich soil. Further, there are wild gooseberries[89] and currants,[90] the latter black in color and with a somewhat different taste from that of the red which are cultivated in gardens, though having the same sort of leaves. There are two varieties of cranberries;[91] one grows in swamps on low bushes not as high as the bilberry bushes, the other on small trees. For both the Indians have one name (Rakilun). Of the wild cherry, there are three kinds, not found in Europe at all, and having a very good taste. The one sort[92] grows on high thick trees, which are found in large numbers and yield a very fine red wood that is well suited for cabinet work. The other kinds[93] grow on bushes. On the islands in the Susquehanna, cherries[94] are found, very like the cultivated fruit, having about the same form and taste. The only difference is that they grow neither on trees nor bushes, but on vines, which lie on the ground and when lifted up appear laden with fruit.

3:Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



●[137] These grow on very stony ground near the water, where the sunshine is particularly hot. In these parts I have not come across this variety.

Besides, there are mulberries,[95] plums,[96] and wild grapes of three sorts, those growing on high ground[97] or hills being the best; those[98] found in the bottoms are very sour. Crabapples[99] grow in great plenty and the Indians, being very fond of sharp and sour fruit, eat them in abundance.

[222 26]

Of nuts there are found: (1) The well known hazel nut,[100] (2) the hickory nut,[101] found in great plenty in some years and which the Indians gather in large quantities and use not only as they find them — they have a very sweet taste — but also extract from them a milky juice used in different foods and very nourishing. Sometimes they extract an oil by first roasting the nut in the shell under hot ashes and pounding them to a fine mash, which they boil in water. The oil swimming on the surface is skimmed off and preserved for cooking and other purposes. (3) The walnut of two varieties, the white walnut[102] deriving its name from the color of the wood which, strictly speaking, is gray, and the black walnut,[103] of which the wood is dark-brown, sometimes even shading into violet. The latter is very much used by cabinet makers for tables, chests and other things. The nuts, the one variety having a very hard shell, are eaten, but are very oily.

[252]

The papa[104] tree, which I have seen nowhere else than along the Ohio, bears a very beautiful fruit, in form and size resembling a middle sized cucumber, of an agreeable smell and taste.

Wild laurel[105] is found in the bottoms in great abundance; the berries are smaller than those found elsewhere, but have about the same taste. Of these, even the whites make use. They grow on bushes, the wood of which has a strong spicy color and taste, used by the Indians for medicine and called by the English, spicewood.[106]

[278 824]

Chestnuts[107] are very plentiful in some years. The Indians gather them and prepare various dishes with them. A larger variety of chestnuts[108] is native to these parts, but these are not fit to eat.

[222 262]

3: Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



Of roots, wild potatoes[109] and wild parsnips are found. Bread is baked of both, which one may be driven to eat by pangs of hunger. The Indians look for both roots when famine threatens and the supply of corn runs low, sometimes sustaining life with them for a considerable period.

A kind of bean, called by the Indians earth-bean, because it grows close to the ground, is also found and tastes when boiled, like the chestnut.

Wild citrons[110] or May apples, grow on a stalk not over a foot high. The Indians enjoy eating the fruit, which has a sour but pleasant taste. The roots are a powerful poison which, who eats, dies in a few hours' time unless promptly given an emetic.

Watermelons and muskmelons, which grow by culture only, are very refreshing in summer. Of some watermelons the meat is yellow and the seeds black; of others the meat and seeds red.

The forests contain mainly oak trees; other kinds of trees are, however, also found. They are not dense, but generally sufficiently open to allow comfortable passage on foot or horseback. There are five varieties of oak, white-oak,[110a] black-oak,[110b] red-oak,[110c] Spanish-oak,[110d] and swamp-oak.[110e] The red-oak has very narrow, small leaves and bears little colored acorns, such as I have seen nowhere else. Besides these, hickory trees of three sorts,[111] ash,[112] white and red beech,[113] sassafras,[114] in some places very thick, poplar[115] and chestnut[116] are the kinds generally found on high lying land. In the bottoms there are walnut, linden,[117] maple,[118] water-beech,[119] that grow near to the water and often attain great height and girth, hawthorne[120] and crab-apple.[121]

The Hoop-ash,[122] a little known tree and found only in this region, has this name because barral-hoops are made of the wood. It grows in the bottoms and is of little use otherwise, as the wood easily rots.

The Honey-locust[123] is likewise found in the bottoms. This tree but little resembles the locust of Pensilvanien, except that there is some similarity in foliage, though the leaves are smaller and finer. The trunks of the thickest trees are two feet in diameter on the average. The trunk is covered with thorns that stand straight out, are about six inches long and very sharp.

3;Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



●137 The wood is red, very hard and heavy and does not rot very quickly in the ground. It bears pods that fall off in the autumn. Besides the seeds, the pods contain a kind of molasses or honey, thus accounting for the name Europeans have given the tree. The Indians call it the thorn-tree on account of its many thorns.

Sugar trees are usually found in low, rich soil, sometimes, also, on higher land and in more northerly regions even on hills, where, however, the soil is very moist. The Delawares call this tree the *Achsunnamunschi*, that is, the stone-tree, on account of the hardness of the wood. The Mingoes give it a name signifying the sugar tree, as do the Europeans. From 222 the sap of the tree sugar is boiled. This is done by the Indians 252 in the early part of the year, beginning in February and continuing to the end of March or beginning of April, according as spring is early or late. In this region it is possible to boil sugar even in fall after there has been frost and in winter, if the season is mild. For as soon as the trees thaw a little the sap begins to run and then the trees are tapped. As, however, at that time of the year the weather is very uncertain and it is possible that there should be a cold wave at any time, it is hardly worth the effort to make the necessary arrangements and is hardly ever done, unless some one be driven of necessity to provide sugar for the household. This, we ourselves have been obliged to do and the sisters of our congregation have already boiled a quantity of sugar for congregational love-feasts, shortly before Christmas.

Spring is the proper season for boiling sugar. The following preparations are made. A number of small troughs [415] are made for receiving the sap. Usually, the Indians make them of wood, cutting them out roughly with a hatchet. Some Indians are able to make twenty or thirty of them in a day. Some do not go to so much trouble, but make dishes of the bark or bast of a tree, which serve quite as well, but are good for no more than one season. According as they have large or numerous kettles and troughs they can make much sugar, for there is no lack of trees. Besides the smaller troughs and dishes,

3; Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7
IROQUois NM9



D 252
D [462]

hundred pounds of sugar in a season and a quantity of molasses, besides.

Sugar boiling is chiefly the employment of women. Even widows are able to earn enough by it to secure clothing and whatever else they may need. While the women are thus engaged, the men hunt and supply meat. As the deer skins are of little value at that season of the year, they generally hunt bear, which they seek in the rocks, hollow trees or thickets in their winter quarters. Bears are at this time generally fat.

D 137

Dog-wood[128] is also found in these parts. The rind of the root is used in the apothecary shops in place of Jesuit-Bark.[129] This tree grows to be neither large nor high.

Red Cedars[130] are found along the Muskingum finer and larger than I have seen elsewhere in North America. They do not grow on the mountains as in Pensilvanien, where they are stunted and scrubby, but in the bottoms.

The spruce tree[127] is neither a fir nor a pine, according to my view, but something between the two. In this region the tree is found only occasionally along the creeks and rivers. In more northerly districts, however, there are great spruce forests and swamps.

Pitch-pine[128] is rarely found here and white pine[129] not at all; a hundred miles to the south one may see many specimens of either variety. Fir trees[130] I have seen near the source of the Ohio and pines[131] not far from Bethlehem, across the Blue Mountains in the great swamp.

Vines are very numerous, especially in the bottoms. They climb up the trees and look like anchor strands, often being thicker than these. The grapes they bear have a sour taste. Those which grow on the highlands and only have short, tender shoots, being frequently disturbed in their growth by brush-fires, have the best grapes. These have a good taste. Experience has taught that good wine may be made of both kinds.

I [824 415]

The elm tree,[132] already noticed above, is of no particular use, for the wood rots quickly, except that the Mingoes make bast canoes and kettles for sugar boiling of the bark, which is very tough.

3:Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



137 [278] The bark of stone birch[123] trees, as of many others, the Indians pound fine, mix with water and use as a medicine. This is the only variety of birch trees here. In Pensilvanien there are birch trees like those of Europe, though they do not grow to any size.

Aspen trees[124] are also found, though not in great numbers nor everywhere. One kind of tree is found here that I have seen nowhere else. The wood is soft and yellowish. The leaves are smooth and oval-shaped. The Indians call it *Wiseweminschi*, the yellow tree.[125]

317 Of oil wells I have seen three kinds, (1) wells that have an outlet; (2) wells that have no outlet, but are stagnant pools; (3) wells in creeks and even in the Ohio at two different points, one hundred and fifty miles from one another.

In the wells which have an outlet, oil and water together exude from the earth and where these flow grass and soil become oily. When there is no means of discharge one sees nothing more than oil welling up, which, if none has been taken off for some time, floats an inch or more in depth on the water. In the creeks it is possible to see some of the places where the oil flows, others not, for often the current carries the oil with it at such rate that you see the oil over all the surface of the water. In the Ohio there are, also, such places in the region of the oil wells. Here the current is very gentle and the Indians skim off the oil, though it is not easy to do this as the current, even though not swift, keeps carrying it along. Such places are usually revealed by the strong odor. Even though the water of a river keeps carrying away the oil, one may smell it at a distance of a quarter of a mile from the well. The soil near an oil well is poor, either a cold, clayey ground, or if it is near a creek, a poor quality of sand at the top. Neither good grass or wood will grow nearby, hardly anything more than a few stunted oak trees.

If the Indians wish to collect oil, which they prefer to do where the well has no discharge, as it is there most easily secured, they first throw away the old oil floating on top, as it has a stronger odor than that which wells up fresh from the earth.[126]

3:Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



predictions. In one important respect, according to my opinion, they make mistakes, namely, in not properly measuring doses and often needlessly torturing patients. Hence, it is that in connection with the external hurts, where over-treatment is less likely to occur, they have the better results, as is the case with rheumatism, for which they use only external applications. One Indian knows of good remedies for one disease or kind of injury, another another. Owing to the fact that they rarely reveal their knowledge to each other, much of the practical knowledge is lost.

In the matter of diseases peculiar to women, the women know a number of remedies, which usually act quickly and well, as in the case of hard labor, which sometimes occurs, though not frequently, and in other troubles. If mothers cannot suckle children for want of milk, they are able, by use of a drink, to increase the supply.[142]

In the use of poisonous roots the Indians are well versed, and there are many melancholy examples where they have by their use destroyed themselves or others. If a case of poisoning is taken in time, the effect of the poisonous root may be prevented by inducing vomiting. In case assistance is rendered too late, death follows, as a rule, in a few hours. There are poisonous roots that operate by slow degrees, in some cases illness may last a year or longer.

The so-called Poison Vine[143] grows plentifully in the bottoms. It climbs up the trees, much as a grape vine will, the main stem becoming as thick as an arm. Some are affected with swelling in the face and body if they touch it, others, even when the wind blows over it upon them. This is very painful until cured. Others do not suffer from the vine at all. This holds good of Indians as of others.

There are some poisonous trees.[144] These do not attain great height. They have a milky juice under the bark which is very poisonous.

The bark of many different kinds of trees is used by the Indians for preparing medicine. Occasionally, you will meet an Indian who has knowledge in this kind of remedies, but knows nothing of roots or herbs. With the white walnut bark,[145]

3: Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



braneous continuation of the skin of the sides and belly by which its hind and forelegs are connected. This supports the animal in leaping from one tree to another. In other respects it resembles the common squirrel. 136

3) There is found here a variety of rattlesnake[222] I have seen nowhere else. It is hardly a foot long and very slender, it has rattles as have the other varieties and its bite is quite as venomous. The color is, also, like that of the other rattlers, yellow with black markings.

4) Plants. Laurel,[222] also called the wild box, grows along river banks, or in the swamps in cool places or on the north side of mountains. It grows so thickly that it is impossible to get through. In swamps of laurel, bears like to make their winter quarters. The wood is fine and hard. The Indians make spoons of it. The main stem does not become thicker than a leg. The leaves are green summer and winter. 137 [322]

THE END.

3:Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



55. *Silsoztdion vitreum* (Mitchill) the pike or sauger.

56. *Lepisosteus osseus* (L.)

57. *Salvelinus fontinalis* (Mitchill), the speckled or brook trout.

58. *Anguilla chrysypa* Rafinesque.

59. *Phoca vitulina* L., the harbour seal, common farther north, though rare in this latitude even in salt water. Their occurrence at Wyoming nearly 200 miles up the Susquehanna River is quite remarkable, though other similar occurrences have been recorded.

60. *Chamaecyparis thyoides* (L.), the white cedar.

61. *Alces americanus* (Clinton). The animals migrated south in the winter crossing the Niagara, or the Lakes on the ice.

62. *Salmo salar* Linnaeus, the Atlantic salmon, formerly very abundant in the Hudson River though now nearly or quite exterminated there.

63. *Anguilla chrysypa* Rafinesque. Possibly the author was more familiar with the lamprey eel, *Ichthyomyzon concolor* (Kirtland) in the Muskingum region, hence his reference to the more slender head of *Anguilla chrysypa*. However, inasmuch as there is but the one true eel in our fresh waters and the lamprey is small and seldom seen, it seems probable that the eels which the author knew in New York and along the Muskingum were of the same sort. In autumn there is a universal migration of the adult eels to the sea to spawn. The Indians, true to their insight into nature, made the best of this opportunity for securing them in great quantities.

64. Niagara Falls.

65. Probably one of the Three Sister Islands.

66. Oneida Lake.

67. Cayuga Lake.

68. Seneca and Ithaca Lakes.

69. *Pyrus coronaria* L., the American crab apple or wild apple.

70. Mohawks.

71. Reference here is to Sullivan's expedition of 1779. The date of the writing of this history is here shown to be 1780.

72. Indicating that even with the unskilled cultivation of the Indians, the corn in different regions developed varieties each suited to its particular locality.

73. North Carolina.

74. Fort Frontenac, now Kingston, Canada.

75. One of the most elaborate descriptions of this route through Central Pennsylvania is given in Francis Baily's *Journal* of a *Tour in Unsettled parts of North America*. Sideling Hill is near the Juniata; Laurel Hill is a continuance of Chestnut Ridge, the latter being the local name of the range in Pennsylvania. Zeisberger's mention of it as the important western route at this period (pointing, as it does well back in the eighteenth century) is significant.

3:Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



78. The parallel chains of the Blue Ridge now known as Second and Third and Peters Mountains, being at that time without a name, Conrad Weiser called them, on the occasion of Zinzendorf's second journey into the Indian country, "The Thurnstein" in honor of this distinguished personage, one of whose titles was Lord of Thurnstein.

77. Jack's Mountain.

78. The present Erie, Pa.

79. By way of French Creek. Perhaps no other authority gives the name of Venango or *Onenge* as the name of this stream.

80. Turtle Creek.

81. Ligonier, Pa.

82. Kentucky River.

83. Cuyahoga River.

84. Scioto River.

85. *Fragaria virginiana* Duchesne.

86. *Rubus nigrobaccus* Bail, the common blackberry and *Rubus villosus* L., the dewberry.

87. *Rubus occidentalis* L.

88. *Vaccinium pennsylvanicum* Lam., the dwarf blueberry.

89. *Ribes cynosbati* L., the prickly gooseberry.

90. *Ribes floridum* L'Her., the wild black current.

91. *Vaccinium macrocarpon* Ait, the common cranberry and *Viburnum opulus* L., the tree cranberry.

92. *Prunus serotina* Ehrh., the common wild cherry.

93. *Prunus pennsylvanica* L., and probably *Prunus cuneata* Raf.

94. *Prunus pumila* L., the sand cherry.

95. *Morus rubra* L., the common red mulberry.

96. *Prunus americana* Marsh.

97. *Vitis aestivalis* Michx.

98. *Vitis cordifolia* Michx. and *Vitis vulpina* L.

99. *Pyrus coronaria* L. and *Pyrus angustifolia* Ait., both occur along the Muskingum and probably both were used by the Indians.

100. *Corylus americana* Walt.

101. *Carya* species (?) Doubtless the Indians made use of most of the half dozen edible species of the region.

102. *Juglans cinerea* L.

103. *Juglans nigra* L.

104. *Asimina triloba* Dunal.

105. *Benzoin aestivale* (L.) the common spice-bush, apparently.

106. Spicebush.

107. *Cadmera dentata* (Marsh).

108. An interesting reference to the Ohio Buckeye, *Aesculus glabra* Willd.

109. *Ipomoea panduratа* (L.) a relative of the morning glory with tuberous roots.

3:Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



110. *Podophyllum peltatum* L., the root of which is still a staple medicinal herb. 137

110a. *Quercus alba* L., the white oak.

110b. *Quercus velutina* Lam., the black or quercitron oak.

110c. *Quercus rubra* L., red oak.

110d. *Quercus falcata* Michx., Spanish oak.

110e. *Quercus palustris* Muench., the swamp Spanish or pinoak.

111. Doubtless more than three!

112. *Fraxinus americana* L., is the most common one, though other species occur in the region.

113. *Fagus grandifolia* Ehrh. There is but one beech though the wood in some is quite different in color from that of others.

114. *Sassafras variifolium* (Salisb.)

115. *Liriodendron tulipifera* L., the tulip tree, commonly called poplar.

116. *Castanea dentata* (Marsh).

117. *Tilia americana* L., basswood or linden.

118. *Acer saccharinum* L., the silver maple is most abundant near the water, though *Acer saccharum* Marsh, the sugar maple, and var. *nigrum* (Mx) also occur in the bottom lands.

119. *Carpinus caroliniana* Walt., the American hornbeam, is usually known as water beech but this description evidently refers to the sycamore, *Platanus occidentalis* L., sometimes called water beech. There is no other reference which could apply to the sycamore and it was then as now, a conspicuous tree of the river banks.

120. *Crataegus* species (?) Several of the 65(!) species accepted by the seventh edition of Gray's *Manual* occur here.

121. *Pyrus coronaria* L., and *Pyrus angustifolia* Ait.

122. *Fraxinus nigra* Marsh., the black ash.

123. *Gleditsia triacanthos* L.

124. *Cornus florida* L.

125. The bark of *Cinchona succirubra* and other species of *Cinchona* from which quinine is prepared. The Cinchonas grow wild in the Andes Mountains.

126. *Juniperus virginiana* L.

127. *Picea mariana* (Mill.) Black or leg spruce.

128. *Pinus rigida* Mill. Pitch pine.

129. *Pinus strobus* L. White pine.

130. *Abies balsamea* (L.)

131. *Pinus pungens* Lamb, the table mountain pine, presumably.

132. *Ulmus americana* L., and *V. racemosa* Thomas.

133. *Betula nigra* L., the river birch.

134. *Populus tremuloides* Michx., the American aspen.

135. *Cladrastis lutea* (Michx.).

136. Loskiel records that Indians sold oil to the whites "at four guineas a quart." *History*, 118. 435

3;Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7



137. A very questionable statement.

138. It is doubtful what Zeisberger means here by "marble;" possible it was gritty sandstone.

139. Iron Pyrites or "Fool's Gold."

140. Kaolin or China clay; colors in clays are due to impurities. The black clay which burns white evidently contained carbonaceous matter.

141. Yellow ochre.

142. Possibly a decoction made from polk-berries which would stimulate the secretion of the glands of the breasts, etc.

143. *Rhus toxicodendron* L., the poison vine or poison ivy.

144. *Rhus vernix* L., the poison sumac, our most poisonous plant.

145. Not used by the medical profession today.

146. *Odocoileus virginianus* (Boddaert).

147. The introduction of the rifle was the first step in destroying Nature's balance as applied to man and the native wild animals. Doubtless the deer and buffalo easily held their own in spite of the onslaughts of the Indians until the rifle gave the Indians a tremendous advantage as compared with their former weapons.

148. *Ursus americanus* Pallas.

149. In many cases the Indians multiplied the species of our larger mammals, basing their ideas on one or two unusually large individuals they happened to meet, or on some peculiar condition of the pelage. There is only one species of bear known from eastern United States.

150. *Cervus canadensis* (Erxleben) the wapiti, or "American Elk." The author is correct. The wapiti is nearly related to the stag, *Cervus elaphus* L., of Europe and is not an elk at all.

151. *Bison bison* (L.)

152. *Felis couguar* Kerr.

153. *Lynx rufus* (Guldenstaedt).

154. *Vulpes fulvus* (Dasmarest).

155. *Urocyon cinereoargenteus* (Schreber).

156. A black phase of the red fox *Vulpes fulvus*.

157. *Procyon lotor* (L.)

158. *Lutra canadensis* (Schreber).

159. *Castor canadensis* Kuhl.

160. The steel trap was another white man's invention which, placed in the hands of the Indians, proved most destructive to some of the animals which formerly held their own against the less effective methods of the Indians. The price paid for the pelts by the whites, was of course an additional factor in the destruction of many of the native animals.

161. *Didelphis virginiana* Kerr.

162. Certainly open to question and probably merely an Indian belief.

8: Lindeström T-5 (1654-1655) 1925
NM7 Delaware NM7

## CHAPTER XVII.

### Concerning the Hunting and Shooting of the American Savage People.

*The soil in New Sweden is so loose,* as if we 134
stood and poked in ashes, because the earth there is not so closely rooted or sodded, as when it is somewhat used in the beginning, burnt, sown and cut.[1] There indeed grows a great deal of high 134-
grass, which reaches above the knees of a man, 137
but the stalks are so far apart that one can uproot it like flax or hemp. There is also no thickly grown forest but the trees stand far apart, as if they were planted. The soil also appears there in the country, as if it formerly had stood under water, for there is found everywhere on the ground an abundance of all kinds of mussels and shells, as well as other things that are found in the water.[2]

Now as soon as the winter bids good night, they 224
begin with their hunts, which is done with a fine innovation.[3] Now at that time of the year the grass which grows there, as has been said, is as dry as hay. When now the sachem wants to arrange his hunt, then he commands his people [to

---

[1] *Jorden in Nova Suecia är så löös som man stodo och rörde j Aska, af ordsaak att Jorden är ther inthet så tätt rotader eller vällader sdsom när hon blyfwer något j förstonne brukader, brändh, sddder och afslagen.* This is ambiguous. Perhaps it means that the ground is loose before grass-roots and other growths have made it tough.

[2] *Mussior och allehanda skoaler sampt annat som i wattnet finnes.*

[3] *Artigh invention.* See above, Chapt. XV, note 6.